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10/738,471	12/17/2003	Claude Q.C. Hayes	97661.00020	8199

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EXAMINER

BRUENJES, CHRISTOPHER P

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 02/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/738,471	HAYES, CLAUDE Q.C.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Christopher P. Bruenjes	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24, 26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24, 26 and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20051019</u> . | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

***WITHDRAWN REJECTIONS***

1. The double patenting rejections of claims 1-4, 7, 9, and 14-27 over Patent 6,558,568 of record in the Office Action mailed July 26, 2005, Pages 2-3 Paragraph 1, have been withdrawn due to the Terminal Disclaimer filed December 29, 2005.

2. The 35 U.S.C. 112 rejections of claims 1-21 of record in the Office Action mailed July 26, 2005, Pages 4-5 Paragraph 2, have been withdrawn due to Applicant's amendments in the Paper filed December 29, 2005.

3. The 35 U.S.C. 102 rejections of claims 24-27 as anticipated by Pedersen et al of record in the Office Action mailed July 26, 2005, Pages 5-7 Paragraph 3, have been withdrawn due to Applicant's amendments in the Paper filed December 29, 2005.

4. The 35 U.S.C. 102 rejections of claims 1-2, 4-6, 9, 17-18, and 22-27 as anticipated by Chase et al of record in the Office Action mailed July 26, 2005, Pages 7-8 Paragraph 4, have been withdrawn due to Applicant's amendments in the Paper filed December 29, 2005.

5. The 35 U.S.C. 103 rejection of claim 27 over Pedersen in view of Lamon of record in the Office Action mailed July 26, 2005, Pages 9-10 Paragraph 5, has been withdrawn due to Applicant's amendments in the Paper filed December 29, 2005.

6. The 35 U.S.C. 103 rejection of claim 27 over Pedersen in view of Lamon and Claar of record in the Office Action mailed July 26, 2005, Pages 10-11 Paragraph 6, has been withdrawn due to Applicant's amendments in the Paper filed December 29, 2005.

7. The 35 U.S.C. 103 rejection of claim 27 over Pedersen in view of Lamon and Lem of record in the Office Action mailed July 26, 2005, Pages 11-12 Paragraph 7, has been withdrawn due to Applicant's amendments in the Paper filed December 29, 2005.

8. The 35 U.S.C. 103 rejections of claims 9, 19-20, 23, and 27 over Chase in view of Lamon of record in the Office Action mailed July 26, 2005, Pages 12-14 Paragraph 8, have been withdrawn due to Applicant's amendments in the Paper filed December 29, 2005.

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9. The 35 U.S.C. 103 rejections of claims 9, 14-16, 23, and 27 over Chase in view of Claar of record in the Office Action mailed July 26, 2005, Pages 14-15 Paragraph 9, have been withdrawn due to Applicant's amendments in the Paper filed December 29, 2005.

10. The 35 U.S.C. 103 rejections of claims 9, 21, 23, and 27 over Chase in view of Lem of record in the Office Action mailed July 26, 2005, Pages 15-16 Paragraph 10, have been withdrawn due to Applicant's amendments in the Paper filed December 29, 2005.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time

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the application was filed, had possession of the claimed invention.

Although the limitations of claim 4 were presented previously the limitation was not presented in combination with the limitation that the heat sensitive device is a flight data recorder. The specification only teaches embodiments in which the flight data recorder is surrounded by a hydroxide in order to prevent excessive heat from the environment surrounding the flight data recorder from damaging the flight data recorder, which requires that the hydroxide heat absorber be external to the flight data recorder. Therefore, the specification does not describe in such a way as to reasonably convey to one skilled in the art, at the time the application was filed, that the inventor had possession of an invention in which the hydroxide is surrounded by a flight data recorder as claimed in claim 4.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1-13, 20, and 22-23 are rejected under 35

U.S.C. 102(b) as being anticipated by Pedersen et al (USPN 4,543,281). Note this rejection is repeated from the previous Office Action, however, in light of the newly added limitations the rejection is rewritten below.

Regarding claims 1-2, 22, Pedersen et al anticipate an article of manufacture for heat absorption comprising a hydroxide in an amount sufficient to affect a level of heat absorption and a support means such as a retaining matrix for supporting said hydroxide (see abstract and col.3, 1.1-11). The hydroxide is supportable in relation to said heat sensitive device by said support means (col.3, 1.40-57). The hydroxide affects the level of heat absorption at least in part based on an irreversible decomposition of said hydroxide (col.3, 1.1-11). Note the limitation "said hydroxide being supportable in relation to a heat sensitive device by said support means; wherein said heat sensitive device is a flight data recorder" in claim 1 and the similar limitation in claim 22 do not positively

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claim the flight data recorder. The limitations of claims 1 and 22 merely claim an article of manufacture comprising the hydroxide and support means, and that the hydroxide is supportable in relation to a heat sensitive device. This limitation therefore requires that the article is the hydroxide and support and that the article is intended to be in supportable relation to a heat sensitive device, since the heat sensitive device is not positively claimed as a component of the article. Thus, because the heat sensitive device is not positively claimed as component of the article and merely that it has a relation to the hydroxide and support means, the placement of the hydroxide and support means in relation to a heat sensitive device is considered an intended use or functional limitation. Functional limitations are given little patentable weight in article claims since articles are defined by what the article is not what it does. In the case of Pedersen et al, the article of manufacture for heat absorption includes the positively recited structural limitations with regard to the hydroxide and support means, and the article has the structural requirements to place the hydroxide in supportable relation to a flight data recorder, since it is taught to be used in storage units (col.3, 1.40-57). Therefore, because the article of Pedersen anticipates the structure of the



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claimed article including the structure required to enable the hydroxide to be in supportable relation to a flight data recorder, the article of Pedersen anticipates the invention of claims 1 and 22.

Regarding claims 3-4 and 8, the hydroxide in the matrix is coated or covers the heat sensitive device that is either rigid or flexible (col.3, 1.40-52). Therefore the heat sensitive device is embedded or surrounded by said hydroxide, and in the embodiment in which the heat sensitive device is flexible the hydroxide is adhered to a flexible substrate that is adaptable to the size and shape of a heat sensitive device.

Regarding claims 5-7, Pedersen et al also teach that the hydroxide is sealed between an inner and outer surface of a storage unit (col.3, 1.52-57). Therefore, in that embodiment the hydroxides is located and supported by a closed container by lining the inner wall of the container's outer wall and the device is located within and spaced from said hydroxide by the inner wall of the container.

Regarding claim 9, 20, and 23, the hydroxide is aluminum hydroxide (see abstract).

Regarding claim 10, in the embodiment in which the hydroxide is used as shell for electric cables, the heat sensitive device is the electrical wire, which is covered by an

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insulation covering. Therefore the insulation of the cable is placed between the heat sensitive device and the support means containing hydroxide.

Regarding claim 11, the outer layer or layers of the storage tank or vessel acts as at least one layer of insulation between said support means and a source of heat in the embodiment in which the hydroxide is placed between the inner and outer layers of the tank or vessel.

Regarding claims 12 and 13, the inner and outer layers of the storage tank or vessel surround the hydroxide and support means forming a hermetic seal, that inherently has a vent because the granular material must have had some opening to dump the granular material in between the inner and outer layers.

13. Claims 1-9, 20, 22-24, and 26-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Gregg et al (USPN 5,804,294).

Regarding claims 1, 22, 24, and 26, Gregg et al anticipate in combination a flight data recorder in thermal communication and with a heat absorbing control article such as insulation material (see abstract). The insulation material contains a support means, for supporting a hydroxide, made of fumed silica and the hydroxide is aluminum trihydrate (col.2, 1.57-65). Note

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aluminum trihydrate is a synonym for aluminum hydroxide as defined in Hawley's Condensed Chemical Dictionary. The hydroxide effects said level of heat absorption at least in part based on an irreversible decomposition of said hydroxide, in which the hydroxide is dehydrated (col.3, 1.56-64). Regarding claim 2, the means for supporting said hydroxide comprises a retaining matrix of silica and/or binder (col.2, 1.57-65). Regarding claims 3-8, the hydroxide surrounds and embeds within it, the flight data recorder by being placed between the flight data recorder and the outer housing (col.1, 1.15-36), and the thermal liner or insulation is a flexible substrate that the hydroxide is adhered to, and the substrate has sufficient flexibility to conform to the size and shape of the flight data recorder. Regarding claims 9, 20, 23, and 27, the hydroxide is aluminum trihydrate, which is aluminum hydroxide (col.2, 1.60-65).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at

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the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 1-13, 20, 22-24, and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salyer (USPN 5,370,814) in view of Pedersen et al (USPN 4,543,281).

Regarding claims 1, 22, 24, and 26, Salyer teaches in combination a flight data recorder (reference number 20, Figure 2 and abstract) within an inner housing (reference number 22, Figure 2), which is surrounded and embedded within a powder-like mix of silica particles and phase change material (reference number 30, Figure 2 and abstract). The silica particles or outer housing (reference number 14, Figure 2) represent the support means for supporting the phase change material. The phase change material includes salt hydrates (col.2, 1.54-56).

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Salyer fail to teach using a hydroxide as the phase change material. However, aluminum hydroxide is a salt hydrate and Pedersen et al teach that aluminum hydroxide is a preferred endothermic material for use in fire or flame barrier articles, such as the article of Salyer, because the dehydration and decomposition of the aluminum hydroxide absorbs large quantities of heat per amount of aluminum hydroxide (col.2, 1.8-55). One of ordinary skill in the art would have recognized that Salyer and Pedersen et al are analogous insofar as both references are concerned with forming fire or flame barrier material for protecting heat sensitive devices. Therefore, one of ordinary skill in the art would have recognized that aluminum hydroxide is used as a phase change material or endothermic material for providing a fire or flame barrier for a heat sensitive device, since it absorbs large quantities of heat per amount of material, as taught by Pedersen et al.

Thus, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to select aluminum hydroxide as the salt hydrate phase change material of Salyer, since it is a well known and preferred material for the purpose of providing a fire or flame barrier to heat sensitive devices based on its endothermic properties during decomposition, as taught by Pedersen et al.

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Regarding claim 2, Salyer teaches that the phase change material is supported by a retaining matrix such as silica powder and/or an enclosure or structure, such as the outer housing of the device.

Regarding claims 3-8, Salyer teaches that the phase change material is supported by a flexible substrate of silica that conforms to the shape of a heat sensitive device, and is supported between the inner housing and outer housing of the device, so that the material surrounds and embeds within it the heat sensitive device. Furthermore, the heat sensitive device is spaced from the material by the inner housing wall.

Regarding claims 9, 20, 23, and 27, Pedersen et al teach that the hydroxide is aluminum hydroxide.

Regarding claim 10, Salyer teaches the article comprises the inner housing which is a layer of housing between said heat sensitive device and said support means.

Regarding claim 11, Salyer teaches the article further comprises at least one layer of insulation placed between said support means and a source of heat (col.7, 21-25).

Regarding claims 12 and 13, Salyer teaches that the article further comprises a hermetic seal (reference number 14, Figure 2) surrounding said support means that includes a vent (reference number 15, Figure 2) (col.7, 1.55-63).

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16. Claims 9, 17-19, 23, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salyer in view of Pedersen et al as applied to claims 1, 22, and 24 above, and further in view of Lamon et al (USPN 5,453,453).

Salyer and Pedersen et al teach all that is claimed in claims 1, 22, and 24 as shown above, but fail to teach using magnesium, calcium, or beryllium hydroxide as the hydroxide. However, Lamon et al teach that when forming fire or flame barrier material for protecting metal, plastic and composite parts, such as the material of Pedersen et al, alkaline earth metal hydroxides and aluminum group hydroxides are interchangeable (col.2, 1.20-25). One of ordinary skill in the art would have recognized that Salyer, Pedersen et al and Lamon et al are analogous insofar as both references are concerned with forming fire barrier material for the protection of metal, plastic, and composite parts.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to substitute any alkaline earth metal hydroxide, such as magnesium, calcium, or beryllium hydroxides, for the aluminum hydroxide of Pedersen depending on the desired end result of the

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article, since each hydroxide will have a different temperature at which it decomposes.

17. Claims 9, 14-16, 23, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salyer in view of Pedersen as applied to claims 1, 22, and 24 above, and further in view of Lamon et al and Claar et al (USPN 4,421,661).

Salyer and Pedersen et al teach all that is claimed in claims 1, 22, and 24 as shown above, but fail to explicitly teach using Lithium, Sodium or Potassium hydroxide as the hydroxide of the fire barrier material. However, Lamon et al teach that other hydroxides such as alkaline earth metal hydroxides are interchangeable with aluminum hydroxide, all of the metallic hydroxides absorb large quantities of heat, and that the particular hydroxide is chosen depending on the specific temperature desired. Claar et al goes on to teach that not only alkaline earth metal hydroxides, but also alkaline metal hydroxides, such as lithium, sodium, and potassium hydroxides, also absorb large quantities of heat and are chosen depending on the specific temperature desired (see abstract). One of ordinary skill in the art would have recognized that all four references are analogous insofar as they are all concerned



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with the endothermic heat properties and heat absorption of metal hydroxides.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to substitute Lithium, Sodium, or Potassium hydroxides for the aluminum hydroxide of Pedersen et al depending on the intended end use of the article since it has been shown by Lamon et al and Claar et al that alkali metal, alkaline earth metal, and aluminum hydroxides are all interchangeable as heat absorbers depending on the desired temperature level of the endothermic property.

18. Claims 9, 21, 23, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salyer in view of Pedersen as applied to claims 1, 22, and 24 above, and further in view of Lamon et al and Lem et al (USPN 5,167,876).

Salyer and Pedersen et al teach all that is claimed in claims 1, 22, and 24 as shown above, but fail to explicitly teach using ammonium hydroxide as the hydroxide of the fire barrier material. However, Lamon et al teach that other hydroxides such as alkaline earth metal hydroxides are interchangeable with aluminum hydroxide, all of the metallic hydroxides absorb large quantities of heat, and that the

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particular hydroxide is chosen depending on the specific temperature desired. Lem et al goes on to teach that not only alkaline earth metal hydroxides, such as magnesium hydroxide and calcium hydroxide taught in Lamon et al, but also ammonium hydroxide absorb large quantities of heat and are chosen depending on the specific temperature desired (col.20, 1.46 - col.21, 1.37). One of ordinary skill in the art would have recognized that all four references are analogous insofar as they are all concerned with the endothermic heat properties and heat absorption of materials for use as fire barrier materials.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to substitute ammonium hydroxide for the aluminum hydroxide of Pedersen et al depending on the intended end use of the article since it has been shown by Lamon et al and Lem et al that ammonium hydroxide, alkaline earth metal, and aluminum hydroxides are all interchangeable as heat absorbers depending on the desired temperature level of the endothermic property.

19. The 35 U.S.C. 103 rejections of claims 9, 17-19, and 23 over Pedersen in view of Lamon are repeated for the reasons set forth in the previous Office Action mailed July 26, 2005, Pages 9-10 Paragraph 5.

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20. The 35 U.S.C. 103 rejections of claims 9, 14-16, and 23 over Pedersen in view of Lamon and Claar are repeated for the reasons set forth in the previous Office Action mailed July 26, 2005, Pages 10-11 Paragraph 6.

21. The 35 U.S.C. 103 rejections of claims 9, 21, and 23 over Pedersen in view of Lamon and Lem are repeated for the reasons set forth in the previous Office Action mailed July 26, 2005, Pages 11-12 Paragraph 7.

***ANSWERS TO APPLICANT'S ARGUMENTS***

22. Applicant's arguments regarding the double patenting rejections of claims 1-4, 7, 9, and 14-27 of record have been considered but they are moot since the rejections have been withdrawn.

23. Applicant's arguments regarding the 35 U.S.C. 112 rejections of claims 1-21 of record have been considered but they are moot since the rejections have been withdrawn.

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24. Applicant's arguments regarding the 35 U.S.C. 102 rejections of claims 1-13, 20, and 22-23 as anticipated by Pedersen have been considered but they are not found persuasive.

In response to Applicant's argument that Pedersen fail to teach or suggest the potential utility of hydroxides as a heat absorption material in connection with a flight data recorder, claims 1 and 22, do not positively claim a flight data recorder as a structural component of the article claimed. The article claimed comprises hydroxide and a support means, and requires that the hydroxides be supportable in relation to a heat sensitive device by said support means. Pedersen teach an article comprising hydroxide and a support means such as a polymeric matrix and/or an inner wall of a closed container. Both of these support means enable hydroxide to be supported in relation to a flight data recorder, since a flight data recorder is merely an electronic component within a housing or closed container and Pedersen teaches that the support means includes closed containers. Therefore, because the article of Pedersen has the structural limitations claimed and the structure to be capable of the utility or function of being in relation to a flight data recorder, the article of Pedersen anticipates all of the limitations of claims 1 and 22.

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25. Applicant's arguments regarding the 35 U.S.C. 102 rejections of claims 1-2, 4-6, 9, 17-18, and 22-27 as anticipated by Chase have been considered but they are moot since the rejections have been withdrawn.

26. Applicant's arguments regarding the 35 U.S.C. 103 rejections of claims 9, 14-19, 21, and 23 over Pedersen in view of Lamon and/or Claar and/or Lem respectively have been considered but they are not found persuasive.

In response to Applicant's argument that none of the secondary references in combination with Pedersen teach all of the limitations of claims 1 and 22, see the response to claims 1 and 22 showing that Pedersen teaches all that is claimed in those two claims.

27. Applicant's arguments regarding the 35 U.S.C. 103 rejections of claims 9, 14-16, 19-21, 23, and 27 over Chase in view of Lamon, Claar, or Lem respectively have been considered but they are moot since the rejections have been withdrawn.

### ***Conclusion***

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Groenewegen

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(USPN 4,694,119); Salyer (USPN 5,447,917); Thompson et al (USPN 5,438,162); Purdom (USPN 5,750,925).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Bruenjes whose telephone number is 571-272-1489. The examiner can normally be reached on Monday thru Friday from 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher P Bruenjes  
Examiner  
Art Unit 1772  
*CPB*  
CPB  
February 10, 2006

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

*2/10/06*